CORNELL UNIVERSITY
THE SCHOOL OF NUTRITION

1944-45

PUBLISHED BY THE UNIVERSITY
ITHACA, NEW YORK

The University Calendar for 1944-45

	1944		SUMMER TERM
July	3,	*Monday,*	Registration, Navy students.
July	4,	*Tuesday,*	Registration, civilian students.
July	5,	*Wednesday,*	Instruction begins at 8 A.M.
July	27,	*Thursday,*	Last day for the payment of tuition for the Summer Term.
Oct.	24,	*Tuesday,*	Instruction ends at 4 P.M.
			FALL TERM
Nov.	1,	*Wednesday,*	Registration, civilian students.
Nov.	2,	*Thursday,*	Registration, Navy students.
Nov.	3,	*Friday,*	Instruction begins at 8 A.M.
Nov.	23,	*Thursday,*	Last day for the payment of tuition for the Fall Term.
Dec.	25,	*Monday,*	Christmas, a holiday.
	1945		
Feb.	22,	*Thursday,*	Instruction ends at 4 P.M.
			SPRING TERM
March	2,	*Friday,*	Registration, Navy students.
March	3,	*Saturday,*	Registration, civilian students.
March	5,	*Monday,*	Instruction begins at 8 A.M.
March	29,	*Thursday,*	Last day for the payment of tuition for the Spring Term.
June	23,	*Saturday,*	Instruction ends at 12:50 P.M.

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FACULTY OF THE SCHOOL OF NUTRITION

ADMINISTRATION

EDMUND EZRA DAY, Ph.D., LL.D., President of the University.
LEONARD AMBY MAYNARD, Ph.D., Director of the School.
LEO CHANDLER NORRIS, Ph.D., Secretary of the School.

INSTRUCTION AND RESEARCH

WILLIAM H. ADOLPH, Ph.D., Professor (*Nutrition*).
SIDNEY ARTHUR ASDELL, Ph.D., Professor (*Physiology*).
LEROY LESTER BARNES, Ph.D., Associate Professor (*Biophysics*).
RICHARD BRADFIELD, Ph. D., Professor (*Agronomy*).
LOWELL W. CHARKEY, M.S., Instructor (*Nutrition*).
WILLIAM M. CURTISS, Ph.D., Associate Professor (*Economics*).
CHARLES DOUGLAS DARLING, M.D., Assistant Professor (*Medicine*).
PETER J. W. DEBYE, Ph.D., Professor (*Chemistry*).
EUGENE F. DUBOIS, M.D., Professor (*Physiology*).
JUNE DUKINFIELD, B.S., Research Associate (*Nutrition*).
HENRY HUGH DUKES, D.V.M., Professor (*Physiology*).
VINCENT DU VIGNEAUD, Ph.D., Professor (*Biochemistry*).
JOSEPH A. DYE, Ph.D., Associate Professor (*Physiology*).
GORDON HUFF ELLIS, Ph.D., Assistant Professor (*Biochemistry*).
FREDERICK S. ERDMAN, Ph.D., Assistant Professor (*Mechanical Engineering*).
FAITH FENTON, Ph.D., Professor (*Food and Nutrition*).
GRACE FIALA, A.B., Research Associate (*Medicine*).
WILLIS A. GORTNER, Ph.S., Assistant Professor (*Biochemistry*).
CARL EDWARD GUTERMAN, Ph.D., Professor (*Pathology*).
KARL C. HAMNER, Ph.D., Assistant Professor (*Physiology*).
KATHERINE WYCKOFF HARRIS, M. A., Professor (*Institution Management*).
LORIN E. HARRIS, Research Associate (*Nutrition*).
MILICENT LOUISE HATHAWAY, Ph.D., Associate Professor (*Nutrition*).
HAZEL MARIE HAUCK, Ph.D., Professor (*Nutrition*).
BARBOUR L. HERRINGTON, Ph.D, Professor (*Biochemistry*).
GUSTAVE F. HEUSER, Ph.D., Professor (*Nutrition*).
FORREST FRANK HILL, Ph.D., Professor (*Economics*).
JOHN M. LAWRENCE, Ph.D., Research Associate (*Nutrition*).
JOHN F. LINGENFELTER, Ph.D., Research Associate (*Nutrition*).
JOHN KASPAR LOOSLI, Ph.D., Associate Professor (*Nutrition*).
CLIVE MAINE MCCAY, Ph.D., Professor (*Nutrition*).
NANCY K. MASTERMAN, M.S., Research Associate (*Food*).
LEONARD AMBY MAYNARD, Ph.D., Professor (*Nutrition*).
JOHN I. MILLER, Ph.D., Professor (*Animal Husbandry*).
HELEN MONSCH, M.A., Professor (*Nutrition*).
NORMAN SLAWSON MOORE, M.D., (*Medicine*).
FRANK BARRON MORRISON, B.S., Professor (*Nutrition*).
WALTER NELSON, Ph.D., Research Associate (*Nutrition*).
LEO CHANDLER NORRIS, Ph.D., Professor (*Nutrition*).
CATHERINE PERSONIUS, Ph.D., Professor (*Food*).
MARION CAROLINE PFUND, Ph.D., Professor (*Food Chemistry*).
FRED HOFMAN RHODES, Ph.D., Professor (*Chemical Engineering*).
MILTON L. SCOTT, A.B., Research Associate (*Nutrition*).
PAUL E. SHARP, Ph.D., Professor (*Biochemistry*).
JAMES MORGAN SHERMAN, Ph. D., Professor (*Bacteriology*).
GRACE STEININGER, Ph.D., Assistant Professor (*Nutrition*).
ELMER H. STOTZ, Ph.D., Professor (*Chemistry*).
JAMES BATCHELLER SUMNER, Ph.D., Professor (*Biochemistry*).
CHARLOTTE MARIE YOUNG, Ph.D., Assistant Professor (*Dietetics*).

THE SCHOOL OF NUTRITION

The School of Nutrition was established at Cornell University in order to meet the enlarged and diversified needs of the many fields of work in which a thorough knowledge of nutrition and related sciences has become of importance. The program of the School offers an opportunity for the study of problems in nutrition, food technology and food economics, and problems of food supply and distribution. Its curriculum provides for the training of research workers and teachers in nutrition, nutritionists in public welfare and institutional work, and personnel for the food and feed industries.

The School is organized to give two or more years of integrated nutrition training to students who have already completed three years of appropriate college work. In order to give the variety of instruction called for in training students for the different fields of work in nutrition, the School draws upon the various colleges and departments of the University for its faculty and for its teaching and research facilities. The faculty includes professors in the basic sciences and in the medical and various applied fields.

Well-equipped laboratories and other facilities are available for research in the fields covered by the School program, including work in fundamental nutrition and in the more specialized fields of human and animal nutrition. For the study of foods and of the techniques of nutrition and their application, chemical, physiological, pathological, and bacteriological laboratories are provided. Air-conditioned rooms house colonies of the various species of laboratory animals used in nutrition research work. Farm animals, including poultry, are available for basic and applied work with these species. Opportunities are also offered for work with fish and furbearing animals.

The U. S. Plant, Soil, and Nutrition Laboratory, established at Cornell in 1939, provides facilities for studying the relation of the production and processing of food crops to their nutritive value. The Department of Clinical Medicine offers opportunity for studying the relation of diet to the maintenance of human health and resistance to disease. Through the New York Hospital, field experience is available to students wishing to prepare for nutrition work in health agencies.

ADMISSION

In order to be admitted to the School of Nutrition, students already registered in Cornell University must have completed three years of course work, including courses in English, Physics, Chemistry, and Biology; and also, depending to some extent on the special interests of the students, courses in Mathematics, Foreign Language, Economics, and Social Science. For more detailed information concerning the nature of the pre-nutrition work, the student should refer to the "Suggested Schedules of Courses" given upon pages 10 to 15 of this Announcement.

Students not registered at Cornell University must meet the following additional requirements: (1) The general requirements for admission to the University as set forth in the *General Information Number*. (2) The full requirements for admission to the fourth year of work in the College of Agriculture, the College of Arts and Sciences, or the College of Home Economics. For these requirements see the respective college announcements.

Students may obtain the three years of pre-nutrition training required for entrance to the School of Nutrition at Cornell University by applying for admission to the College of Agriculture, the College of Arts and Sciences, or the College of Home Economics. They will be advised during this period by a member of the faculty of the college concerned who is acquainted with the program of the School.

During the first year in the School the student will register in an undergraduate college of the University, and thus qualify for the Bachelor's Degree at the end of the year. During the second year the student will register in the Graduate School and be eligible to receive the Master's Degree upon the completion of the prescribed work. A student has the opportunity, therefore, to obtain five or more years of integrated training. After receipt of the Master's Degree the student may then continue further study and research leading to the Doctor's Degree.

Since students taking the second year of the two-year course in nutrition are registered in the Graduate School, it is essential that they demonstrate the scholastic capacity and other qualifications required for advanced study by the time they receive the Bachelor's Degree.

Students who already have the Bachelor's Degree may be admitted to the second year's work of the School provided they have the necessary basic training and also provided they can meet the requirements for admission to the Graduate School.

Students already registered in Cornell University should consult the Secretary of the School of Nutrition in regard to admission to it. Others should direct their request to the Director of Admissions, Cornell University.

Students interested in nutrition, who are matriculating at Cornell University for the first time, should state upon the application for admission to the College of Agriculture, Arts and Sciences, or Home Economics, that the business or profession (field of work) which they expect to enter upon graduation is nutrition. This is necessary in order that faculty advisers acquainted with the program of the School of Nutrition may be assigned to them.

TUITION AND FEES

During the first year in the School of Nutrition the student will pay the tuition fee of the college in which he has matriculated as a candidate for the Bachelor's Degree. Following the completion of

work for this degree and upon admission to the Graduate School he will pay the tuition fee of that School. Tuition rates are as follows:

Four hundred dollars in the College of Arts and Sciences.
Two hundred dollars in the College of Agriculture.*
Two hundred dollars in the College of Home Economics.*
Two hundred dollars in the Graduate School.

For a complete statement regarding tuition and other fees, see the *General Information Number* and the Announcement of the college in which the student matriculates.

FELLOWSHIPS AND SCHOLARSHIPS

A number of fellowships and scholarships are open to students in the School of Nutrition. These include the Henry Strong Denison Fellowship in Animal Sciences, the Clinton De Witt Smith Fellowship in Agriculture, the University Fellowship in Agriculture, the University Tuition Scholarships, and the Phi Kappa Phi Scholarship. Application for these should be filed in the Office of the Dean of the Graduate School on, or before, March 1 of the academic year preceding the one for which application is made. More complete information concerning these fellowships and scholarships can be obtained from the Announcement of the Graduate School of Cornell University.

In addition to the fellowships enumerated above, a number of Special Temporary Fellowships in support of graduate research work in nutrition are awarded by the Faculty of the Graduate School as vacancies occur. Information regarding them can be obtained from the Secretary of the School of Nutrition.

CURRICULUM

Upon entrance to the School, the student will be assigned a faculty adviser in the College of Agriculture, Arts and Sciences, or Home Economics, acquainted with the nutrition work. This adviser will assist the student in planning a course of study during the first year which will supplement his previous preparation, provide basic training in nutrition, and enable him to complete the requirements for the Bachelor's Degree. During his second year, the student will receive additional basic training and pursue specialized nutrition and related studies in accordance with the specific field of work which he desires to enter. The basic training will include courses in the principles of nutrition and in the underlying biological sciences, particularly biochemistry and physiology. In addition, the student will be expected to take certain courses in the application of nutrition principles to man and animals, in the chemistry, processing, and distribution of foods, and in certain other applied aspects of nutrition. In order

*Tuition is free to undergraduate students in the College of Agriculture and the College of Home Economics, who at the time of their admission are, and for at least twelve months prior thereto have been, *bona-fide* residents of the State of New York.

to qualify for the Master's Degree, his studies during the second year will be under the supervision of a special committee and he will be required to present a thesis or essay, as provided by the regulations of the Graduate School.

Students who have shown special aptitude in their studies during the two years and have given promise of ability in research may continue their studies for the degree of Doctor of Philosophy, in accordance with the regulations of the Graduate School. Students who contemplate continuing for this degree should plan to obtain a reading knowledge of scientific German or French during their second year in the School if they have not done so previously. Such a reading knowledge is desirable for the nutrition student whether or not he plans to continue for the Doctor's Degree.

The previous statements indicate that there is no set curriculum for the student of nutrition, but that the training of each will be carried out in accordance with his need, having in mind the specialized field of work which he desires to enter.

REQUIREMENTS FOR THE M.S. DEGREE

During the second year of the two-year nutrition course, when students are preparing for the M.S. Degree, they will follow Plan A or Plan B described below.

Plan A. This plan is intended primarily for those candidates who, by suitably restricting their graduate work to a given field, wish to acquire some degree of competence in that field, frequently as a basis for further study and research, or for professional purposes. The candidate selects a Major Subject and a related Minor Subject and a Special Committee, made up of members of the Faculty to represent those subjects. He must (1) work under the direction of this Special Committee for at least the minimum required period of residence and must complete his work to the satisfaction of the committee; (3) present a thesis (or essay) acceptable to his committee; and (3) pass a final examination.

Plan B. This plan is designed for those who wish a somewhat broader training than is permitted under Plan A. The candidate, working under the direction of a Special Committee, is required (1) to complete satisfactorily a minimum of thirty semester hours of work, comprising (a) work in formal courses and in seminars including such examinations as may be given therein; and (b) either an acceptable expository or critical essay or problem in research, or if he prefers, a formal thesis; and (2) to pass a final comprehensive examination.

For further information concerning these plans see the *Announcement of the Graduate School.*

SCHEDULE OF COURSES

Schedules of studies have been set up to serve as a guide to students taking all of their nutrition work at Cornell University. In these

schedules the three years of pre-nutrition work and the two-year program of the School of Nutrition have been integrated for the convenience of the student. Many of the courses listed in these schedules are electives for which substitution may be made if the student finds this more in accord with his special interests. (Because of war conditions, some of the suggested courses may not be given). The schedules, although set up in terms of courses at Cornell University, can also be used as a guide by students taking the pre-nutrition work elsewhere.

Schedules A and B are designed for students who are interested in the more technical aspects of nutrition as in teaching and research. Schedule A is suitable for those taking pre-nutrition work in the College of Agriculture and meets the requirements of this College. Schedule B is suitable for those working in the College of Arts and Sciences and meets the requirements for the B.S. Degree with major field of work in chemistry. Schedule C is designed for students interested in the less technical aspects of nutrition, as in the food and feed industries and in agriculture, and meets the requirements of the College of Agriculture. Schedule D is designed for students interested in preparing for work in health agencies and Schedule E is designed for students interested in laboratory work in food preparation and food processing. If electives are properly chosen, both Schedule D and E meet the requirements of the College of Home Economics.

In the following schedules, the figure in the first column after the name of the course is the departmental course number and refers to a description in this Announcement, pages 16 to 31, or in the Announcements of the Colleges of Agriculture, Arts and Sciences, and Home Economics. The figures in the second column indicate the hours of credit a term given for the successful completion of the several courses.

SCHEDULE A

For Students in the College of Agriculture

FIRST YEAR

	Course	Credit a Term Fall	Spring
Introductory Course in Reading and Writing	2	3	3
General Chemistry	1a and 2a	4	4
General Botany	1	3	3
Introductory Zoology	1	3	3
Mathematics	—	3	3
Orientation	—	1	–
Total Credits		17	16

SECOND YEAR

Introductory Quantitative Analysis	220 and 221	–	6
Introductory Experimental Physics	7 and 8	4	4
Introductory Geology	1	3	–
General Bacteriology	1	6	–
Modern Economic Society	2a and 2b	3	3
Livestock Feeding	10	–	4
Total Credits		16	17

THIRD YEAR

Introductory Organic Chemistry	305a and b	3	3
Introductory Organic Chemistry	310a and b	3	3
Physiology of Domestic Animals	12 and 13	3	3
Plant Physiology	31	–	4
Nature and Properties of Soils	1	–	5
Higher Bacteria and Related Microorganisms	105	4	–
General Sociology	1	3	–
Total Credits		16	18

FOURTH YEAR

Biochemistry, Advanced Lecture Course	320 and 322	3	3
Biochemistry, Advanced Laboratory Course	321 and 323	2	2
Analytic Methods	111	–	4
Production of Field Crops	11	4	–
Physiology of Bacteria	210	2	–
Food Preparation	210	4	–
Poultry Nutrition	110	–	3
Vegetable Crops	1	–	3
Oral and Written Expression	101 and 102	2	2
Total Credits		17	17

FIFTH YEAR

Principles of Nutrition	110	3	–
Laboratory Work in Nutrition	111	3	–
Nutrition	230	–	3
Physical Chemistry	405 a and b	3	3
Seminar in Animal Nutrition	219	1	1
Total Credits*		10	7

*When plan B is elected, the credit hours should total 30.

SCHEDULE B

For Students in the College of Arts and Sciences

FIRST YEAR

	Course	Credit a Term Fall	Spring
Introductory Course in Reading and Writing	2	3	3
Introductory Inorganic Chemistry	110a and b	3	2
Introductory Inorganic Chemistry	115	3	–
Introductory Qualitative Analysis	203	–	5
Introductory Experimental Physics	3 and 4	3	3
Foreign Language*	–	3	3
Total Credits		15	16

SECOND YEAR

Introductory Quantitative Analysis	220 and 221	6	–
Introductory Zoology	1a and b	3	3
Foreign Language*	–	3	3
Analytical Geometry and Calculus	65a	–	3
Introduction to Animal Husbandry	1	3	–
Livestock Feeding	10	–	4
Public Speaking	1	–	3
Total Credits		15	16

THIRD YEAR

Introductory Organic Chemistry	305a and b	3	3
Introductory Organic Chemistry	310a and b	3	3
Introductory Physical Experiments	55	–	3
Analytical Geometry and Calculus	65b and c	3	3
General Bacteriology	1	6	–
Modern Economic Society	1	–	5
Total Credits		15	17

FOURTH YEAR

Physical Chemistry	406a and b	3	3
Introductory Physical Chemistry	410a and b	3	3
Analytical Methods	111	–	4
Physiology of Domestic Animals	12 and 13	3	3
Introduction to Sociology and Anthropology	2	3	–
History	–	3	3
Total Credits		15	16

FIFTH YEAR

Biochemistry	320 and 322	3	3
Biochemistry	321 and 323	2	2
Principles of Nutrition	110	3	–
Laboratory Work in Nutrition	111	3	–
Nutrition	230	–	3
Seminar in Animal Nutrition	219	1	1
Total Credits**		12	9

*When 2 units in German are offered for entrance only 12 hours of a foreign language are required for graduation.

**When plan B is elected, the credit hours should total 30.

SCHEDULE C

For Students in the College of Agriculture

FIRST YEAR

	Course	Credit a Term Fall	Spring
Introductory Course in Reading and Writing	2	3	3
General Chemistry	102 or 104	3	3
General Botany	1	3	3
Introductory Zoology	1	3	3
Financial Statements	121	3	–
Accounting Method	122	–	3
Orientation	1	1	–
Total Credits		16	15

SECOND YEAR

Introductory Analytical Chemistry	201	4	–
Elementary Organic Chemistry	375	–	6
Introductory Experimental Physics	3 and 4	3	3
Introductory Geology	100	3	–
Poultry Nutrition	110	–	3
Modern Economic Society	2a and b	3	3
General Sociology	1	3	–
Total Credits		16	15

THIRD YEAR

Elementary Biochemistry	314	–	3
Laboratory Work in Biochemistry	314a	–	3
Analytical Methods	111	–	4
Physiology of the Domestic Animals	12 and 13	3	3
The Nature and Properties of Soils	1	5	–
Oral and Written Expression	101	2	–
Corporation Finance	31	3	–
Marketing	141	3	–
Psychology, an Introductory Course	110	–	3
Total Credits		16	16

FOURTH YEAR

General Bacteriology	1	6	–
Production of Field Crops	11	4	–
Vegetable Crops	1	–	3
Money, Currency, and Banking	11	3	–
Business Law	127	3	–
Prices	115	–	3
Livestock Feeding	10	–	4
Farm Management	102	–	5
Oral and Written Expression	102	–	2
Total Credits		16	17

FIFTH YEAR

Principles of Nutrition	110	3	–
Laboratory Work in Nutrition	111	3	–
Nutrition	230	–	3
Food Processing and Nutrition	317	–	2
Seminar in Animal Nutrition	219	1	1
Total Credits*		7	6

*When plan B is elected, the credit hours should total 30.

SCHEDULE D

For Students in the College of Home Economics

FIRST YEAR

	Course	Credit a Term Fall	Spring
Introductory Course in Reading and Writing	2	3	3
Science Related to Food Preparation	115–215	5	5
Nutrition	130	–	3
Health of the Family	110	–	2
Orientation	100(a)	2–3	–
Courses in Home Economics or Electives*	–	5	2–3
Total Credits		15–16	15–16

SECOND YEAR

Elementary Biochemistry	314	3	–
Laboratory Work in Biochemistry	314a	3	–
General Biology	1	3	3
Psychology: An Introductory Course	110	3	–
Human Physiology	303	–	3
General Sociology	1	3	–
Economic Conditions in Relation to the Welfare of Families	130	–	3
Health in the Home and Community, and Home Nursing	120	–	2
Courses in Home Economics or Electives*	–	–	4–5
Total Credits		15	15–16

THIRD YEAR

Introductory Experimental Physics	3 and 4	3	3
Household Bacteriology	4	–	3
Meal Planning and Preparation	260	3	–
Nutrition	230	–	3
Family Relationships and Personality Development	260	–	3
Psychology for Students of Education	112	3	–
Problems in Providing Consumer's Goods	160	3	–
Marketing Trip to New York City	147	–	1
Courses in Home Economics and Electives*	–	3	2–3
Total Credits		15	15–16

FOURTH YEAR

Rural Sociology	12	3	–
Social Case Work	123	–	3
Practice in Social Work Agencies	124	3	–
Family Nutrition with Special Emphasis on Child Feeding**	340 and a, b, or c	–	3
Diet Therapy**	330	2	–
Endocrinology and Metabolism**	305	3	–
Laboratory in Physiology**	306	–	3
Management in Family Living	310	3	–
Management in Relation to Personal Finances	330	–	3
Educational Leadership in Homemaking and Family Life	330	–	3
Courses in Home Economics or Electives*	–	1–2	–
Total Credits		15–16	15

FIFTH YEAR

	Course	Credit a Term Fall	Spring
Principles of Nutrition	110	3	–
Laboratory Work in Nutrition	111	3	–
Seminar in Food and Nutrition	420	1	1
Readings in Nutrition	400	2	–
Seminar in Animal Nutrition	219	–	1
Courses in Minor Field, and Special Problem or Thesis	–	–	–
Total Credits		9	2

*Work in all areas of Home Economics must be taken to meet the requirements for graduation from the College of Home Economics.

**Courses may be postponed to the fifth year and taken for graduate credit.

SCHEDULE E

For Students in the College of Home Economics

FIRST YEAR

	Course	Credit a Term Fall	Spring
Introductory Course in Reading and Writing	2	3	3
Science Related to Food Preparation	115–215	5	5
Nutrition	130	–	3
Orientation	100(a)	2–3	–
Courses in Home Economics or Electives*	–	4–5	4–5
Total Credits		14–16	15–16

SECOND YEAR

Elementary Biochemistry	314	3	–
Laboratory Work in Biochemistry	314a	3	–
General Biology	1	3	3
Psychology: An Introductory Course	110	3	–
Human Physiology	303	–	3
General Sociology	1	3	–
Economic Conditions in Relation to the Welfare of Families	130	–	3
Institution Food Service	100	–	3
Meat and Meat Products	92	–	1
Courses in Home Economics or Electives*	–	–	2–3
Total Credits		15	15–16

THIRD YEAR

Introductory Experimental Physics	3 and 4	3	3
General Bacteriology	1	6	–
Meal Planning and Preparation	260	–	3
Nutrition	230	–	3
Food Preparation, Advanced	240	3	–
Courses in Home Economics or Electives*	–	3	6
Total Credits		15	15

FOURTH YEAR

	Course	Credit a Term Fall	Spring
Science Related to Foods, Advanced Course	310	3	–
Experimental Cookery	320	–	3
Food Demonstrations	305	–	1
Food Preservation	250	–	3
Food Selection-Purchase for Institutions	220	3	–
Quantity Food Preparation: Principles and Methods	230	5	-
Introductory Analytical Chemistry	201	–	4
Statistical Methods of Analysis**	211	2	–
Courses in Home Economics or Electives*	–	2–3	4–5
Total Credits		15–16	15–16

FIFTH YEAR

Principles of Nutrition	110	3	–
Laboratory Work in Nutrition	111	3	–
Seminar in Food and Nutrition	420	1	1
Applied Bacteriology	103	–	6
Food Chemistry and Nutrition	316	2	–
Analytical Methods	111	–	4
Total Credits		9	11

*Work in all areas of Home Economics must be taken to meet the requirements for graduation from the College of Home Economics.

**Courses may be postponed to the fifth year and taken for graduate credit.

COURSES OF INSTRUCTION

The information in parenthesis following the name of the course refers to the college in which the course is given, the department, and the course number. In registering for any of these courses the department and course number should be used rather than the name of the course.

Information concerning many elective courses is not given in this Announcement but may be obtained from the announcements of the colleges of Agriculture, Arts and Sciences, and Home Economics. A complete description of the courses listed in the schedules may also be obtained from these announcements when not given in the announcement of the School of Nutrition.

NUTRITION

Principles of Nutrition. (Agriculture; Animal Husbandry 110.) Fall. Credit three hours. For advanced and graduate students. Prerequisite; a course in human or veterinary physiology, and a course in organic chemistry. Lectures, M W F 10. Wing B. Professor MAYNARD and Assistant Professor LOOSLI.

The chemistry and physiology of nutrition and the nutritive requirements for growth, reproduction, lactation, and other body functions.

Laboratory Work in Nutrition. (Agriculture; Animal Husbandry 111.) Fall. Credit three hours. Must be preceded or accompanied by Course 110. Registration by permission. M W F 1:40–4. Animal Nutrition Laboratory, Dairy Industry Building. Professor ADOLPH.

This course is designed to familiarize the student with the application of chemical methods to the solution of fundamental problems of nutrition. Laboratory fee, $10; breakage deposit, $5.

Biochemistry of Lactation. (Agriculture; Animal Husbandry 213.) Spring. Credit one hour. Given in alternate years. Prerequisite, Course 110. Hour to be arranged. Professor MAYNARD and Assistant Professor LOOSLI.

A discussion of the biochemistry of the processes involved in milk secretion and of the composition of milk as related to diet and to blood precursors.

[**Special Topics in Animal Nutrition.** (Agriculture; Animal Husbandry 214.) Spring. Credit one hour. Given in alternate years. Prerequisite, Course 110 and Biochemistry 314. Professor MAYNARD and Assistant Professor LOOSLI. Not given in 1944–45.]

A presentation and discussion of the knowledge and techniques of special fields of animal nutrition.

[**History of Nutrition.** (Agriculture; Animal Husbandry 215.) Fall. Credit one hour. Prerequisite, Course 110 and permission to register. One meeting a week at an hour to be arranged. Dairy Industry Building 160. Professor MCCAY. Not given in 1944–45.]

Lectures and conferences on the nutrition of animal species from the invertebrate to man, with special emphasis upon the fundamental discoveries in such fields as growth, comparative biochemistry, and physiology that have been synthesized into the modern science of nutrition.

Seminar in Animal Nutrition. (Agriculture; Animal Husbandry 219.) Fall and spring. Open to graduate students only. Registration by appointment. Assigned readings on selected topics, with weekly conferences. M 4:15. Professors MAYNARD, ADOLPH, NORRIS, and HAUCK.

A consideration of the experimental data on which the principles of animal nutrition are based, and a critical review of current literature.

Experimental Methods in Poultry Nutrition. (Agriculture; Poultry Husbandry 210.) Fall. Credit two hours. For graduate students. Not given every

year and not unless five or more students apply for the course. Registration by appointment. Discussion and laboratory period. W 1:40–5. Rice. Professor NORRIS.

A critical consideration of the domestic fowl as an experimental animal and of the experimental methods used in conducting research in poultry nutrition. Laboratory fee, $5.

Nutrition. (Home Economics; Food and Nutrition 130.) Fall and Spring. Credit three hours. Lectures and discussion, T Th 11. Van Rensselaer Amphitheatre. Laboratory, M 2–4, T 8–10, W 8–10 or 2–4. Van Rensselaer 426. Assistant Professor STEININGER and Mrs. GIFFT.

Selection of an adequate diet and its importance in achieving and maintaining optimum health. Fee, $6.

Nutrition, Advanced Course. (Home Economics; Food and Nutrition 230.) Spring. Credit three hours. Prerequisite, Food and Nutrition 130, Human Physiology 303, Biochemistry 314, and some work in food preparation. Discussion, W Th 2. Van Rensselaer 339. Laboratory, T or F 2–4. Van Rensselaer 426. Professor HAUCK and Mrs. GIFFT.

The function of various food constituents such as proteins, minerals, and vitamins. Application of the principles of nutrition to needs of normal individuals. During and as a result of this course the student is expected to establish and maintain good nutrition practices. Fee, $6.

Family Nutrition, with Special Emphasis on Child Feeding. (Home Economics; Food and Nutrition 340.) Fall and Spring. Credit for lectures, two hours; for each laboratory, one hour. Any laboratory may be taken either in the same term with the lecture or in any term following the lecture. Primarily for seniors or graduate students; juniors by permission of the instructor. Prerequisite, Food and Nutrition 130 or the equivalent. Lecture and discussion, T 2–4. Van Rensselaer 339. Professor MONSCH and Miss LORENZEN. Laboratories: A. Infant Feeding. Limited to twenty students. Th 2–4. Van Rensselaer 426 and 432. B. Feeding of Pre-School Children. Limited to ten students. W 2–4:20. Van Rensselaer 301 and 432. C. Feeding of School Children. Limited to ten students F 2–4:20. Van Rensselaer 301.

A study of family nutrition, with special emphasis upon the nutritional needs of the child. Experience in actual family situations, through private homes, the well-baby clinic, the nursery school, and the public schools. Fee, $1 for lecture, $7 for each laboratory credit hour.

Diet Therapy. (Home Economics; Food and Nutrition 330.) Fall. Credit two hours. Primarily for seniors and graduate students. Prerequisite, Food and Nutrition 230 or the equivalent; registration with permission Lecture, discussion, and demonstration, T Th 11. Van Rensselaer 426. Professor HAUCK.

Diet in those diseases such as fevers, gastrointestinal disturbances, and diabetes, in the treatment of which choice of food is important. Fee, $4.

Readings in Nutrition. (Home Economics; Food and Nutrition 400.) Spring. Credit two hours. Registration by permission of the instructor. Discussion, T Th 9. Van Rensselaer 301. Miss ————. A critical review of current literature, emphasizing the experimental data on which the principles of human nutrition are based. Fee, $1.

Research in Food and Nutrition. (Home Economics; Food and Nutrition 410.) Fall and spring. Credit and hours to be arranged. Registration by permission. Professors MONSCH, PERSONIUS, PFUND, HAUCK, FENTON. Associate Professor HATHAWAY, Assistant Professors STEININGER and YOUNG and Professors MAYNARD and ADOLPH and Associate Professor LOOSLI.

Individual research in food, human nutrition, and animal nutrition. Fee from $5 to $25.

Seminar in Food and Nutrition. (Home Economics; Food and Nutrition 420.) Fall and Spring. Credit one hour. Emphasis on Nutrition, Fall; on Food, Spring. Required of graduate students specializing in Food and Nutrition. Hours to be arranged. Van Rensselaer 301. Professors PERSONIUS, FENTON, and HAUCK, Associate Professor HATHAWAY and Assistant Professor STEININGER. Fee, $1.

FOOD

Analytical Methods. (Agriculture; Dairy Industry III.) Spring. Credit four hours. Prerequisite, quantitative analysis. Lectures, T Th 10. Laboratory practice, T 1–5. Dairy Industry Building 120. Professor HERRINGTON and Dr. LAWRENCE.

The chemical analysis of products and materials important in the dairy and food industries. Laboratory fee, $10.

Science Related to Food Preparation. (Home Economics; Foods and Nutrition 115.) Fall. Credit five hours (one hour, Foods; four hours, Chemistry) Lecture and discussion, M W F 9. Van Rensselaer. Amphitheatre and rooms 339, 3M13, and G62. Laboratory M W 10–12 or 2–4; T Th 8–10, 11–1, or 2–4. Professor PFUND, and Misses HUDSON and SEGER, and Mrs. SELKE and ————.

Fundamental principles and practices of food preparation approached through the study of inorganic and organic chemistry. The influence of kind and proportion of ingredients and of methods of manipulation and cookery on the flavor and texture and nutritive quality of such foods as baking powder products, fruit-ice mixtures, and sugar mixtures. Beverages as solutions.

Laboratory practice in chemistry and comparative cookery includes experiments using simple chemical technics and basic cookery processes. Emphasis on the application of scientific principles to the interpretation of observed results. The course serves as a prerequisite for Food and Nutrition 215. Fee, $18.

Food Preparation; Principles and Comparative Methods. (Home Economics; Food and Nutrition 210.) Fall and Spring. Credit four hours or five hours if Organic Chemistry is offered as a prerequisite. Limited to eighteen students. Prerequisite, General Chemistry. Not to be elected by students who have had Food and Nutrition 215. Lecture, T Th 9, Van Rensselaer 339. If registering for five hours of credit, a third hour will be arranged. Laboratory, T Th 2–4:20. Van Rensselaer 361. Professor FENTON.

The principles of food preparation and the application of science, particularly chemistry, to the solution of cookery problems such as color, flavor, texture, and nutritive changes in handling and cooking vegetables and fruits; heat penetration and hydrogen-ion in canning; crystallization in candies, ice creams, and quick frozen foods; principles of meat cookery and changes in nutritive values during cooking; relation of manipulation of doughs and reaction time of baking powders to quality of cakes and muffins. The literature is reviewed and typical comparative experiments are made. Fee, $18.

Meal Planning and Preparation. (Home Economics; Food and Nutrition 260.) Fall and Spring. Credit three hours. Limited to eighteen students in a section. Prerequisite, Foods and Nutrition 210 or 215 and 130 or the equivalent. Lecture, M 10. Van Rensselaer 339 and 3M13. Laboratory: T Th or W F 10–12:30 or W F 11–1:30, Van Rensselaer 358 and 361. Assistant Professor FOSTER and Miss ERICSON.

Consideration is given to problems involved in the selection of foods and the planning, preparation, and serving of meals. Emphasis on organization, management of time, money, and energy. Fee, $18.

Science Related to Food Preparation. (Home Economics; Food and Nutrition 215.) Spring. Credit 5 hours (3 hours, Food, 2 hours; Chemistry). Prerequisite, Food and Nutrition 115. This course is planned to follow Food and Nutrition 115 and should be taken the term after it. Lecture and discussion, M W F 9. Amphitheatre and Van Rensselaer 339 and 3M13. Laboratory, M W 10–12:20 or T Th 8–10:20 or 10:30–1 or 2–4:20, Van Rensselaer 353, 356 and 358. Professor PFUND and Misses HUDSON and SEGER, Mrs. SELKE and ————.

Fundamental principles and practices of food preparation approached through the study of organic and colloidal chemistry. The influence of kind and proportion of ingredients and of methods of manipulation and cookery on the flavor and texture of baked products, such as cakes and yeast breads, of eggs, meats, and vegetables. Canning.

As a result of Food and Nutrition 115 and 215, students should recognize quality in cooked foods and the factors that contribute to this quality. They

should attain skill in specific cookery technics, and should be able to apply this knowledge and skill critically in food preparation.

Course 215 serves as a prerequisite for Biochemistry 314 and 314a and Chemistry 2 (for three hours credit). Fee, $18.

Food Preparation, Advanced Course. (Home Economics; Food and Nutrition 240.) Fall and Spring. Credit three hours. Prerequisite, Food and Nutrition 100, and 210 or 215. Lecture, M 9. Van Rensselaer 3M13. Laboratory, Fall: M W or T Th 2–4:20; Spring: M W 2–4:20. Van Rensselaer 352. Assistant Professor BOYS and Miss ERICSON.

Special dishes such as canapes, entrees, salads, pastries and other desserts for specific purposes and occasions. Study and preparation of some of the unusual foods and food products. Fee, $18.

Seminar in Food and Nutrition. (Home Economics; Food and Nutrition 420.) A description of this course is given under the heading Nutrition.

Institution Food Service. (Home Economics; Institution Management 100.) Fall and Spring. Credit three hours. May be elected by freshmen upon the recommendation of the class counselor. Required of students majoring in institution management. The term is divided into two blocks with two sections of fourteen students each. One hour of lecture runs throughout the term for the entire group registered in the course. Associate Professor BURGOIN.

Lecture running throughout the term, W 2. Amphitheatre. Van Rensselaer.

Lecture running for the duration of the block, M 2. Van Rensselaer G 62.

Practice, section 1, M W F 11–1:30; section 2, T Th S 11–1:30. Cafeteria. In addition, each student will have one catering assignment by arrangement.

Fall '44: first block, November 3 through December 26 (freshmen); second block, December 29 through February 15 (upperclassmen).

Spring '45: first block, March 5 through April 6 (upperclassmen); second block, April 27 through June 16 (freshmen).

Practical experience in serving and meeting the public is provided in the Home Economics tea room and cafeteria where approximately 1500 persons are served daily. Vocational opportunity in the field of institution management; study of of various types of food-service enterprises with special emphasis on menu variations, mechanics of service, physical set-up, and efficiency of personnel. White uniforms and hair nets required beginning with the first laboratory schedule. Fee, $6.50.

Food Selection and Purchase for the Institution. (Home Economics; Institution Management 220.) Fall and Spring. Credit three hours. Preferably taken in the junior year. May be taken in the sophomore year on the recommendation of the class counselor. Advised for all students specializing in institutional management or dietetics; others may be admitted by permission of the instructor. Should parallel Institution Management 230. Economics of the Household 260 is suggested to precede, and Animal Husbandry 92 to precede or parallel this course. Lectures and discussions, T 9, Th 9–11. Room G 62. Professor HARRIS.

A discussion of sources, grading, standardization, bases of selection, methods of purchase, and storage of the various classes of food. A two-day trip to Rochester, Syracuse, or Buffalo markets may be included. Estimated cost of trip, $8. Fee for materials, $1.

Quantity Food Preparation: Principles and Methods. (Home Economics; Institution Management 230.) Fall and Spring. Credit five hours. Should be taken in the junior year. May be taken in the sophomore year on the recommendation of the class counselor. Advised for all students specializing in institution management; others by permission of the instructor. Prerequisite, Institution Management 100, Foods and Nutrition 210 or 215. Should parallel Institution Management 220. Discussion, M 9. Room G 62. Practice, W F 8–1:30. Room G 62 and Cafeteria. Assistant Professor NEIDERT.

BIOCHEMISTRY

Elementary Biochemistry. (Agriculture; Biochemistry 314.) Spring. Credit three hours. Prerequisite, Chemistry 375 or the equivalent. Lectures, M W

12. Conferences, F 12. Dairy Industry Building 218. Professor SUMNER and Doctor SOMERS.

The substances met with in living things, and the chief facts of digestion, metabolism, and nutrition.

Laboratory Work in Biochemistry. (Agriculture; Biochemistry 314a.) Spring. Credit three hours. Prerequisite or parallel, course 314. M W F 1:40–4, or T 1:40–4 and S 8–1. Dairy Industry Building 175. Professor SUMNER, Doctor SOMERS, and Mr. G. N. SMITH.

Laboratory fee, $10; Breakage deposit, $3.

Biochemistry, Advanced Lecture Course. (Agriculture; Biochemistry 320.) Fall. Credit three hours. Prerequisite, one term of Chemistry 305 and one term of Chemistry 310, or the equivalent, including introductory courses in qualitative and quantitative analysis. Lectures, M W F 9. Wing B. Professor SUMNER and Doctor SOMERS.

The biological and physical chemistry of lipids and carbohydrates.

Biochemistry, Advanced Laboratory Course. (Agriculture; Biochemistry 321.) Fall. Credit two hours. Prerequisite, or parallel, course 320 or 322. Laboratory, M W 1:40–4. Dairy Industry Building 175. Professor SUMNER and Doctor SOMERS.

Laboratory experiments with lipids and carbohydrates. Laboratory fee, $15. breakage deposit, $5.

Biochemistry, Advanced Lecture Course. (Agriculture; Biochemistry 322.) Spring. Credit three hours. Prerequisite, one term of Chemistry 305 and one term of Chemistry 310, or the equivalent, including introductory courses in qualitative and quantitative analysis. M W F 9. Dairy Industry Building 218. Professor SUMNER and Doctor SOMERS.

The biological and physical chemistry of proteins, enzymes, and related substances.

Biochemistry, Advanced Laboratory Course. (Agriculture; Biochemistry 323.) Spring. Credit two hours. Prerequisite, or parallel, course 320 or 322. Laboratory, M W 1:40–4. Dairy Industry Building 175. Professor SUMNER and Doctor SOMERS.

Laboratory experiments with proteins and enzymes. Laboratory fee, $15; breakage deposit, $5.

Food Chemistry and Nutrition. (Agriculture; Biochemistry 600a.) Fall. Credit two hours. Primarily for students in the School of Chemical Engineering. Prerequisite, Chemistry 305 and 310 or Chemistry 375. Lecture and discussion periods, T Th 10. Rice 201. Assistant Professor GORTNER.

A study of the chemistry of the essential nutritive substances, with special emphasis upon the factors affecting their stability, and of the functions of these substances in maintaining optimum nutritional status.

Food Processing and Nutrition. (Agriculture; Biochemistry 600b.) Spring. Credit two hours. Prerequisite, course 316 or Animal Husbandry 110. Lecture and discussion periods, T Th 10. Rice 201. Assistant Professor GORTNER.

A study of the principles of food preservation, of the chief manufacturing processes used in preserving foods, and of the effect of food processing upon the maintenance of nutritive value.

PHYSIOLOGY

Physiology of the Domestic Animals. (Veterinary; Physiology 12.) First year, Spring. Credit three hours. Lectures and recitations on blood and lymph, circulation, respiration, digestion, and absorption. M W F 8. Professor DUKES.

Physiology of the Domestic Animals. (Veterinary; Physiology 13.) Second year, Fall. Credit three hours. Lectures and recitations on excretion, metabolism, heat regulation, endocrine organs, muscle and nerve, central nervous system, senses, and reproduction. M W Th 9. Professor DUKES.

Experimental Physiology. (Veterinary; Physiology 14.) Second year, Fall. Credit three hours. A course in which special emphasis is placed on mammalian physiology. Conferences, T 9. Laboratory, F 8–1 or S 8–1. Laboratory fee, $15. Professor DUKES and Dr. BECKER.

Advanced Experimental Physiology. (Veterinary; Physiology 16.) Spring. Credit three hours. Prerequisites, Course 12 or 13, or its equivalent, and Courses 14 and 15, or their equivalent. A laboratory course in mammalian and avian physiology. Registration by permission. F 9–1. A conference hour to be arranged. Laboratory fee, $10. Professor DUKES and Associate Professor DYE.

Human Physiology. (Veterinary; Physiology 303.) One term. Credit three hours.

An introductory course designed particularly for those students who intend to take only one course in physiology, for those who expect to teach biology in the secondary schools, and for those who desire a general knowledge of the physiological processes of the human body.

Endocrinology and Metabolism. (Veterinary; Physiology 305.) One term. Credit three hours. Prerequisite, six or more hours each of biology and chemistry.

Study of digestion, metabolism, endocrinology, and reproduction.

Laboratory in Physiology. (Veterinary; Physiology 306.) One term. Credit three hours. Registration by permission.

Selected experiments to parallel course 305. Laboratory fee, $10.

Endocrinology, Reproduction, and Lactation. (Agriculture; Animal Husbandry 125.) Spring. Prerequisite, a course in human or veterinary physiology. Credit two hours. Professor ASDELL. M W 10. Wing A.

A general course in endocrinology, with more detailed consideration of the endocrine processes involved in reproduction and lactation.

Plant Physiology. (Agriculture; Botany 31.) Fall or spring. Credit four hours. Prerequisite, course 1 and introductory chemistry. Lectures, T Th 10. Plant Science 143. Laboratory, T Th 1:40–4. Plant Science 227. Professor KNUDSON, O. F. CURTIS, or Assistant Professor CLARK, and assistants.

This course is designed to acquaint the student with the general principles of plant physiology. Topics such as water relations, photosynthesis, translocation, digestion, respiration, mineral nutrition, growth, and reproduction are studied in detail. Particular emphasis is placed, both in laboratory and classroom, on the discussion of principles and their application to plants. Laboratory fee, $4; deposit, $3.

CHEMISTRY

General Chemistry. (Arts and Sciences; Chemistry 102 a and b.) Credit three hours a term. First term prerequisite to second. Open only to those students who do not offer entrance chemistry. Deposit, $11 a term.

This course deals with the fundamental laws and theories of chemistry and the properties of the more common elements and their compounds.

General Chemistry. (Arts and Sciences; Chemistry 104 a and b.) Credit three hours a term. First term prerequisite to second. Open to those students who offer entrance chemistry. Deposit, $11 a term.

This course deals with the fundamental laws and theories of chemistry and the properties of the more common elements and their compounds.

Introductory Inorganic Chemistry. (Arts and Sciences; Chemistry 110 a and b.) Credit three hours first term, two hours second term. Prerequisite, entrance credit in chemistry, or course 102.

Required of candidates for the degree of B. Chem. E., and recommended for candidates for the degree of A.B. who intend to major in Chemistry.

Introductory Inorganic Chemistry. Arts and Sciences; Chemistry 115.) Recitations and laboratory practice. Credit three hours. Must be taken with the first term of Chemistry 110. Deposit, $20.

Introductory Analytical Chemistry. (Arts and Sciences; Chemistry 201.) One term. Credit four hours. Prerequisite, Chemistry 102 or 104. Deposit, $25. Primarily for students majoring in the biological sciences.

A study of the fundamental principles of qualitative and quantitative analysis.

Introductory Qualitative Analysis. (Arts and Sciences; Chemistry 203.) One term. Credit five hours. Prerequisite, Chemistry 115 and Chemistry 110a, or

special permission. Deposit, $30. Must be taken with Chemistry 110 b. Required of candidates for the degree of B. Chem. E. and recommended for candidates for the degree of A.B. who intend to major in Chemistry.

Introductory Qualitative Analysis. (Arts and Sciences; Chemistry 205.) One term. Credit three hours. Prerequisite, Chemistry 102 or 104. Must be taken with Course 206.

A study of the application of the theories of general chemistry to the systematic separation and detection of the common elements and acid radicals.

Introductory Qualitative Analysis. (Arts and Sciences; Chemistry 206.) One term. Credit three hours. Prerequisite, Chemistry 102 or 104. Deposit, $25. Must be taken with Course 205. Laboratory practice.

A study of the properties and reactions of the common elements and acid radicals; the qualitative analysis of a number of solutions and solid compounds.

Introductory Quantitative Analysis. (Arts and Sciences; Chemistry 220.) One term. Credit three hours. Prerequisite, Chemistry 203, or 205 and 206, or special permission. Must be taken with Chemistry 221.

A study of the fundamental principles of gravimetric and volumetric analysis with practice in stoichiometry. Students in science and majors in Chemistry are advised to take this course together with Chemistry 221 instead of Chemistry 225.

Introductory Quantitative Analysis. (Arts and Sciences; Chemistry 221.) One term. Credit three hours. Prerequisite, Chemistry 203, or 205 and 206, or special permission. Must be taken with Chemistry 220. Deposit, $25.

Laboratory practice in the preparation and standardization of various volumetric solutions and the analysis of a variety of substances by volumetric and gravimetric methods.

Students in science and majors in Chemistry are advised to take this course together with Chemistry 220 instead of Chemistry 225.

Introductory Organic Chemistry. (Arts and Sciences; Chemistry 305 a and b.) Credit three hours a term. Prerequisite, qualitative analysis. Open to those who are taking Chemistry 220.

Lectures and written reviews. The more important compounds of carbon, their occurence, methods of preparation, relations, and uses.

Students who have completed Chemistry 375 may register for Chemistry 305b and receive two hours credit.

Introductory Organic Chemistry. (Arts and Sciences; Chemistry 310 a and b.) Credit three hours a term. Prerequisite or parallel course, Chemistry 305. Deposit, $40 a term.

Elementary Organic Chemistry. (Arts and Sciences; Chemistry 375.) One term. Lectures and laboratory, six hours credit. For students in the pre-medical and biological curricula. Prerequisite, general chemistry; qualitative analysis is desirable but not required. Deposit, $25.

The student should determine the entrance requirements in Organic Chemistry for the particular medical school he wishes to enter. If more than six hours credit is required, he should register in Chemistry 305 and 310. Students may obtain 9 hours credit by taking Chemistry 305 a and b (6 hours) and Chemistry 301a (3 hours). See Chemistry 305 announcement. By special permission students may register for five hours credit, with only one laboratory period a week.

Physical Chemistry. (Arts and Sciences; Chemistry 406 a and b.) Credit three hours a term. Prerequisite, Chemistry 305 a and b, which may be taken simultaneously; Mathematics 65a, 65b, and 65c or their equivalent; Physics 3 and 4 (or 6) or 11 and 12. Required of candidates for the degree of A.B. majoring in chemistry and open to other qualified students by permission.

A study of the more fundamental principles of physical chemistry from the standpoint of the laws of the thermodynamics, and of the kinetic theory. A unified treatment of the properties of matter, thermochemistry, the properties of solutions, and of equilibrium in homogeneous and heterogeneous systems. Chemical kinetics and catalysis are included.

Introductory Physical Chemistry. (Arts and Sciences; Chemistry 410 a and b.)

Laboratory and informal recitations. Credit three hours a term Prerequisite or parallel course, Chemistry 405 or 406. Deposit, $20 a term.

Qualitative and quantitative experiments illustrating the principles of physical chemistry and practice in performing typical physico-chemical measurements. Recitations on the general principles of physical chemistry, based upon the lectures.

PHYSICS

Introductory Experimental Physics. (Arts and Sciences; Physics 3.) One term. Credit three hours. Two lectures and one laboratory period a week. Laboratory fee, $5.

Demonstrations, discussions, problems, and experiments covering the subjects of mechanics, properties of matter, sound, and heat.

Introductory Experimental Physics. (Arts and Sciences; Physics 4.) One term. Credit three hours. Prerequisite, course 3 or entrance physics. Two lectures and one laboratory period a week. Laboratory fee, $5.

Demonstrations, theory, problems, and experiments covering the subjects of electricity, magnetism, and light.

Introductory Experimental Physics. (Arts and Sciences; Physics 7.) One term. Credit four hours. Prerequisite, Trigonometry or simultaneous registration in Mathematics 15. Two lectures (lectures of course 3), two recitations, and one laboratory period a week. Laboratory fee, $5.

A treatment of the topics of mechanics, properties of matter, sound, and heat more extended than that given in course 3. Emphasis is placed upon problem solving and discussion of principles. Laboratory work as in course 11.

Introductory Experimental Physics. (Arts and Sciences; Physics 8.) One term. Credit four hours. Prerequisite, Trigonometry or simultaneous registration in Mathematics 15. Two lectures (lectures of course 4), two recitations and one laboratory period a week. Laboratory fee, $5.

A treatment of the topics of electricity, magnetism, and light more extended than that given in course 4. Emphasis is placed upon problem solving and discussion of principles. Laboratory work as in course 12.

Introductory Experimental Physics. (Arts and Sciences; Physics 11.) One term. Credit four hours. Prerequisite, Calculus or simultaneous registration in Mathematics 55a, 60a, or 65b. Entrance physics desirable but not required. Two lectures, two recitations, and one laboratory period a week. Laboratory fee, $5.

Demonstrations, theory, problems, and experiments covering subjects of mechanics, wave motion, sound, and heat.

Required of candidates for the degrees of B.C.E., B.Chem.E., B.E.E., and B.M.E.

Introductory Experimental Physics. (Arts and Sciences; Physics 12.) One term. Credit four hours. Prerequisite, Calculus or simultaneous registration in Mathematics 55a, 60a, or 65b. Entrance physics desirable but not required. Two lectures, two recitations, and one laboratory period a week. Laboratory fee, $5.

Demonstrations, theory, problems, and experiments covering the subjects of electricity, magnetism, and light.

Required of candidates for the degrees of B.C.E., B.Chem.E., B.E.E., and B.M.E.

Introductory Physical Experiments. (Arts and Sciences; Physics 55.) One term. Credit three hours. Prerequisites, one year of introductory college physics. One lecture and two laboratory periods a week. Laboratory fee, $10.

Fundamental experiments in properties of matter, heat, light, and electricity. Intended primarily for students preparing for Medicine or majoring in Biology.

BIOLOGY

General Biology. (Agriculture; Entomology and Limnology 1.) Two terms. Credit three hours a term; both terms of the course must be completed to obtain credit, unless the student is excused by the department. First term not prerequi-

site to second. Not open to students who have had both Zoology 1 and Botany 1. If Biology 1 is taken after either Zoology 1 or Botany 1, credit two hours a term.

An elementary course planned to meet the needs of students majoring outside of the plant and animal sciences; particularly adapted as the first year of a two-year sequence in biology for the prospective teacher of general sciences in the secondary schools. The course deals with the nature of life, life processes, the activities and origin of living things. It covers the organization of representative plants and animals, including man as an organism, and the principles of nutrition, growth, behavior, reproduction, heredity, and evolution. Fee, $3.50 a term.

General Botany. (Agriculture; Botany 1.) Two terms. Credit three hours a term. If taken after Biology 1, credit two hours a term.

A survey of the fundamental facts and principles of plant life. The work of the first term deals with the structures and functions of the higher plants, with special emphasis on their nutrition. The work of the second term traces the evolution of the plant kingdom, as illustrated by representatives of the principal groups, and concludes with a brief introduction to the principles of classification of the flowering plants. Laboratory fees, $3.50 a term.

Introductory Zoology. (Arts and Sciences; Zoology 1a and b.) Two terms. Credit three hours a term. If taken after General Biology I, credit two hours a term.

1a: A survey of invertebrate animals. Consideration of how each of the different body plans possessed by animals without backbones provides for the essential life activities. Also a discussion of the phylogenetic relationships existing between such groups of animals.

1b: A survey of the anatomy and physiology of the vertebrate organ systems, biological principles, and evolution. Laboratory fee, $3 a term.

BACTERIOLOGY

General Bacteriology. (Agriculture; Bacteriology 1.) Fall. Credit six hours. Prerequisite, Chemistry 102 or 104. Lectures, M W F 11. Dairy Industry Building 218. Laboratory practice, M W F 1:40–4. Dairy Industry Building 301. Professor SHERMAN, Assistant Professors GUNSALUS and NIVEN, and assistants.

An introductory course; a general survey of the field of bacteriology, with the fundamentals essential to further work in the subject. Laboratory fee, $15.

Household Bacteriology. (Agriculture; Bacteriology 4.) Fall or spring. Credit three hours. Prerequisite, Elementary Chemistry. Limited to students in Home Economics. Fall term: lectures and laboratory, T Th 1:40–4:30. Spring term: lectures, T Th 10. Dairy Industry Building 218. Laboratory, T Th 8–9:50 or T Th 11–12:50. Dairy Industry Building. Professor STARK and assistants.

An elementary, practical course for students in Home Economics. Laboratory fee, $10.

Applied Bacteriology. (Agriculture; Bacteriology 103.) Spring. Credit six hours. Prerequisite, course 1, quantitative analysis, and organic chemistry. Lectures, recitations, and laboratory practice, M W F 1:40–5. Dairy Industry Building 119 and 301. Professor SHERMAN, Assistant Professors GUNSALUS and NIVEN, and assistants.

The important groups of bacteria that are of significance in water, milk, and foods, together with the methods used in the bacteriological analysis and control of these products. Laboratory fee, $15.

Higher Bacteria and Related Microorganisms. (Agriculture; Bacteriology 105.) Fall. Credit four hours. Prerequisite, course 1. Lectures, recitations, and laboratory practice, T Th 1:40–5. Dairy Industry Building 119 and 323. Professor KNAYSI and Mr. BELLAMY.

A study of the higher bacteria, together with the yeasts and molds that are of especial importance to the bacteriologist. Laboratory fee, $15.

Physiology of Bacteria. (Agriculture; Bacteriology 210.) Fall. Credit two hours. Prerequisites, course 1 and at least one additional course in bacteriology. Professor RAHN. Lectures, T Th 8. Dairy Industry Building 120.

An advanced course in the physiology of bacteria and the biochemistry of microbic processes.

GEOLOGY AND SOILS

Introductory Geology. (Arts and Sciences; Geology 100.) One term. Credit three hours. Laboratory fee, including field trips, $4.25.

Students must register for laboratory assignment. The fundamental principles of this branch of science. This course, followed by another three-hour course in Geology, will satisfy the underclass requirements in laboratory science.

The Nature and Properties of Soils. (Agriculture; Agronomy 1.) Fall or spring. Credit five hours. Prerequisite, Chemistry 102 or 104 and Geology 100. Lectures, M W F 9. Caldwell 100. Laboratory: T or W 1:40–4. Caldwell 49. Two recitations, to be arranged. Caldwell 31. Professor BUCKMAN.

A comprehensive course dealing with the composition, properties, and plant relation of soils, with particular reference to the fundamental principles of maintaining soil fertility. Laboratory fee, $3.

ANIMAL AND POULTRY HUSBANDRY

Introduction to Animal Husbandry. (Agriculture: Animal Husbandry 1.) Fall. Credit three hours. Lectures, W F 10. Warren 25. Laboratory, T or F 1:40–4. Judging Pavilion. Professors MILLER, SALISBURY, TURK, and J. P. WILLMAN.

Introduction to types, breeds, judging, and management of livestock. Laboratory fee, $2.

Livestock Feeding. (Agriculture; Animal Husbandry 10.) Spring. Credit four hours. Lectures, M W F 9. Wing A. Laboratory, Th or F 1:40–4. Wing C. Professors MORRISON and MILLER, and assistants.

The feeding of farm animals, including the general basic principles, feeding standards, the computation of rations, and the composition and nutritive value of livestock feeds.

Meat and Meat Products. (Agriculture; Animal Husbandry 92.) Fall or spring. Credit one hour. Open especially to the students of the College of Home Economics. Registration limited to sixteen students. Laboratory and lecture period, Th or F 2–4:20. Wing B and Meat Laboratory. Associate Professor MILLER and Mr. SCHUTT.

A course in wholesale and retail buying, cutting, curing, and preparation of meats. Laboratory fee, $2.

Farm Poultry. (Agriculture; Poultry Husbandry 1.) Fall. Credit three hours. Lectures, M W F 10. Rice 300. One recitation period, to be arranged. Rice 305. Associate Professor HALL, assisted by other members of the staff.

A general course dealing with the practical application of the principles of poultry husbandry to general farm conditions.

Poultry Nutrition. (Agriculture; Poultry Husbandry 110.) Spring. Credit three hours. Prerequisite, course 1. Not open to freshmen. Lectures, T Th 9. Laboratory, T 1:40–4. Rice 305. Professor HEUSER.

The principles of poultry nutrition and their application to poultry-feeding management.

FIELD AND VEGETABLE CROPS

Production of Field Crops. (Agriculture; Agronomy 11.) Fall or spring. Credit four hours. Seniors and juniors are advised to register in the first term. Prerequisite, course 1 and Botany 1. Fall term: Lectures, M W F 10, Caldwell 100; Laboratory, T 1:40–4, Caldwell 250. Spring term: Lectures, M W F 11, Caldwell 100; Laboratory, W 1:40–4. Caldwell 250. Professor HARTWIG.

A course dealing principally with the crops that are used for feeding livestock and poultry. Emphasis is placed on the hay, silage, pasture, and grain crops of the Northeastern States. Cultural methods, crop rotations, fertilizer practices, soil and climatic adaptation, and the better varieties of the important crops, are considered. Laboratory fee, $3.

Vegetable Crops. (Agriculture; Vegetable Crops 1.) Spring. Credit three hours. Lectures, M W 11. East Roberts 222. Laboratory, M or T 1:40–4. Vegetable greenhouses and East Ithaca gardens. Professor WORK.

A general study of the principles of vegetable growing and handling, giving a comprehensive survey of the industry. Intended for the student who desires a brief general course, and as an introductory course for the student who wishes to specialize in commercial vegetable growing. Economic importance, geography, cultural requirements, marketing, storage, and uses of the important vegetables. A one-day trip is required, usually the last Saturday of the term; approximate cost, $3. Laboratory fee, $2.

ECONOMICS

Modern Economic Society. (Arts and Sciences; Economics 1.) One term. Credit five hours. Not open to freshmen.

A survey of existing economic order, its more salient and basic characteristics, and its operation.

Modern Economic Society. (Arts and Sciences; Economics 2a.) One term. Credit three hours. Not open to freshmen. This course and course 2b cover the same subject matter as course 1.

Modern Economic Society. (Arts and Sciences; Economics 2b.) One term. Credit three hours. Prerequisite, course 2a.

Farm Management. (Agriculture; Agricultural Economics 102.) Spring. Credit five hours. Not open to freshmen. It is desirable that this course should be preceded by as many as possible of the courses dealing with the production of crops and of animals. Lectures, M W F 10. Warren 25. Laboratory, Th or F 1:40–4. Warren 101. On days when farms are visited, laboratory periods are from 1:40–6. Professor WARREN.

Farming as a business; types of farming; size of business; rates of production; labor efficiency; combination of enterprises; farm layout; building arrangement; machinery; forms of tenure and leases; choosing and buying a farm; use of capital and credit; planning the organization and management of specific farms. One all-day trip and four half-day trips are taken during April and May to visit farms in near-by regions. These trips are taken on the day of the regular laboratory period. Fee for materials furnished and for transportation on trips, $6.

Prices. (Agriculture; Agricultural Economics 115.) Spring. Credit three hours. Open to juniors, seniors, and graduate students. Lectures, T Th 9. Laboratory, W 1:40–4. Warren 25. Professor PEARSON.

A study of prices of farm products in relation to agricultural and industrial conditions. Fee for materials furnished, $3.

Financial Statements. (Agriculture; Agricultural Economics 121.) Fall. Credit three hours. Lectures, M W 9. Warren 225. Discussion and quiz, W 2–4. Warren 201. Professor POWELL.

For persons who wish to understand and interpret the statements of financial conditions and income of cooperatives and other businesses. Content of, and relationship between, balance sheet, operating statement, and statement of surplus; methods of valuing assets; analysis by means of ratios. Fee for materials furnished, $2.

Accounting Method. (Agriculture; Agricultural Economics 122.) Spring. Credit three hours. Class will meet during Farm and Home Week for those only who have not had course 121. Lectures, M W 8. Warren 225. Practice period, M 1:40–4. Warren 201. Professor POWELL.

For persons who wish to understand the records and procedures commonly used in keeping accounts of cooperatives and other businesses. Recording business transactions and deriving financial statements; analyses of costs and budgets. Fee for materials furnished, $1.

Business Law. (Agriculture; Agricultural Economics 127.) Fall. Credit three hours. Open to juniors, seniors, and graduate students. Lectures, M W F 8. Caldwell 100. Mr. ALLAN H. TREMAN.

Consideration is given chiefly to legal problems of particular interest to persons

who expect to engage in business, including contracts, liens, mortgages, and negotiable instruments; ownership and leasing of property; wills; estates; inheritance taxation; and other practical problems.

ECONOMICS

Marketing. (Agriculture; Agricultural Economics 141.) Fall. Credit three hours. Lectures, W F 10. Warren 225. Laboratory and discussion; for undergraduates, F 1:40-4. Warren 225; for graduate students, Th 1:40–4, Warren 240. Professor HARPER.

A general course dealing with problems of distribution of farm products. Characteristics of consumer-demand; factors to be considered in judging the best marketing plan from the standpoint of when, where, in what form, and through what channels to sell; public regulations and controls. Fee for materials furnished, $2.

Marketing Trip to New York City. (Agriculture; Agricultural Economics 147.) Spring. Credit one hour. Given only if twenty or more students register. Enrollment limited to 40. Associate Professor CURTISS in charge. Representatives of other departments cooperate in the course.

Five days of the spring vacation are spent in New York City inspecting and studying the marketing of dairy products, eggs, poultry, fruits, vegetables, livestock, and meat. A short series of introductory lectures precede the trip, at hours to be arranged. Fee for materials furnished, $2.

Money, Currency, and Banking. (Arts and Sciences; Economics 11.) One term. Credit three hours. Prerequisite, Economics 1 or its equivalent.

An introductory study of the history and theory of money, currency, and bank credit. Enrollment limited.

Corporation Finance. (Arts and Sciences; Economics 31.) One term. Credit three hours. Prerequisite, Economics 21a or its equivalent.

A study of the financial practices of business corporations in the United States; types of corporate securities; sources of capital funds; determination and administration of corporate incomes; financial difficulties and corporate reorganizations; the relation of corporate practices to the functioning of the American economic system; and the regulatory activities of the Securities and Exchange Commission.

ENGLISH AND PUBLIC SPEAKING

Introductory Course in Reading and Writing. (Arts and Sciences; English 2.) Two terms. Credit three hours a term.

The aim of the course is to increase the student's ability to communicate his own thought and to understand the thought of others. The first term will be devoted primarily to the study of good diction, effective sentences, and the logic of paragraphs, the second to whole compositions. Assignment to sections will be made in *Barton Hall* the first term, and in *Goldwin Smith* C the second. Mr. SALE is in charge of the course.

Public Speaking. (Arts and Sciences; Speech and Drama 1.) One term. Credit three hours. Not open to freshmen.

Planned to give the fundamentals of speech preparation and to develop simple and direct speaking. Study of principles; constant practice; conferences.

Foreign students and others whose pronunciation of English falls below the normal standard, and students with special vocal problems, are advised to confer with Mr. THOMAS before registering.

Oral and Written Expression. (Agriculture; Extension Teaching 101.) Fall or spring. Credit two hours. Open to juniors and seniors. The number in each section is limited to twenty students. Students should consult Professor PEABODY for assignment to sections. Lectures and practice: fall term, W F 10, or T Th 11, T Th 9, Roberts 131; spring term, T Th 9, Roberts 131; T Th 11, Roberts 131. Criticism, by appointment, daily, 8–4, S 8–1. Professor PEABODY and Mr. ———.

Practice in oral and written presentation of topics in agriculture, with criticism and individual appointments on the technics of public speech. Designed to en-

courage interest in public affairs, and, through demonstrations and the use of graphic material and other forms, to train for effective self-expression in public. Special training is given to competitors for the Eastman Prizes for Public Speaking and in the Rice Debate contest.

Oral and Written Expression. (Agriculture; Extension Teaching 102.) Spring. Credit two hours. Prerequisite, course 101, of which course 102 is a continuation. A part of the work of course 102 consists of a study of parliamentary practice. Lectures and practice, W F 10, or T Th 10. Roberts 131. Criticism, by appointment, daily 8–4, S 8–1. Professor PEABODY and Mr. ————.

HOME ECONOMICS

Orientation. (Home Economics; Orientation 100.) Fall. Credit two hours. T Th 10, Amphitheatre. Van Rensselaer. Associate Professors RHULMAN and FAILING, and Mrs. READ and others.

A course designed to acquaint the student with the educational experiences offered in college. Includes work on educational plans, personal and social problems of college freshmen, study improvement, use of time, and vocational opportunities in home economics. Fee, $3.

Orientation. (Home Economics; Orientation 100a.) Credit one hour. Fall. M 9–11, T 8–10, Th 8–10, F 10–12. Discussion M 4, Van Rensselear 213. All laboratory sections limited to twenty each. Associate Professor BUTT and others.

The factors that contribute to a satisfactory appearance, care of the wardrobe, grooming, posture, nutrition. Fee, $1.

Economic Conditions in Relation to the Welfare of Families. (Home Economics; Economics of the Household 130.) Fall and spring. Credit three hours. Primarily for freshmen and sophomores. M W F 11, Amphitheatre, Van Rensselaer. Professor CANON, Assistant Professors ROLLINS and AIKIN.

A course to help students understand the changes that have taken place in the economic welfare of families in this country, and some of the factors related to these changes. Production and distribution as they relate to economic welfare, the national income as it relates to family incomes, the significance of price in our economic organization. The connection between outside economic conditions and personal financial problems. Fee, $2.50.

Problems in Providing Consumers' Goods. (Home Economics; Economics of the Household 260.) Fall and spring. Credit three hours. Open to undergraduate and graduate students. Prerequisite, Economics of the Household 130, T Th 11–12:15, and one additional hour at the convenience of the student. Van Rensselaer 121. Assistant Professor ROLLINS.

The contribution that can be made by an efficient marketing system toward a high level of consumption for our people. Quantity, quality, and variety of supplies available in relation to the level of living of the families of the country and to management in their own homes. The role of price in distribution. Buying practices of consumers as they bear on marketing costs. Problems in standardization of goods. The part that can be played by the Government, business associations, and private agencies and organizations in improving marketing practices, and action that has been taken by these groups. Fee, $2.50.

Management in Family Living. (Home Economics, Economics of the Household 310.) Fall and spring. Credit three hours. For juniors, seniors, and graduate students. Graduate students should consult the instructor before registering.

Fall: M 2, W F 2–4:20; Spring: M 2 and W F 2–4:20; or M 3 and T Th 2–4:20. Van Rensselaer G 19. Associate Professor CUSHMAN and Miss WEAVER.

For students who wish help in understanding the process of management and opportunity for study and practice of this process. Experience in recognizing and analyzing the student's own problems. Meetings in homes, schools, and community centers to see how certain families and groups of people manage differently, with the resources available, to achieve their individual purposes. Cooperation with families and other groups in the study of tasks, and in the solution of home-management problems, especially those brought about by the war. Development of trial work centers set up with portable equipment to help in

determining the most satisfactory way of performing these tasks in each individual case. Practice in the selection and use of source material in management. One all-day tour, time to be arranged. Fee, $10.

Management in Relation to Personal Finance. (Home Economics; Economics of the Household 330.) Fall and spring. Credit three hours. For juniors, seniors, and graduate students. Prerequisite, Economics of the Household 130. M W F 9. Van Rensselaer 121. Assistant Professor AIKIN.

The relationship between financial problems and other types of problems met in managing. The many elements in one's personal situation as well as in outside conditions that need to be considered in handling one's financial affairs. Factors influencing real income and efforts that individuals can make toward attaining financial security. Important consideration in a savings program and in an investment program. Policies in borrowing, sources of credit, availability and charges of lending agencies. Financial records and statements helpful in managing. Fee, $2.50.

Health of the Family. (Home Economics; Family Life 110.) Fall and spring. Credit two hours. Designed for freshmen and sophomores. T Th 9. Amphitheatre. Van Rensselaer. In addition two or three observational trips will be taken during the term. Assistant Professor PEABODY, Professor BULL, and Assistant Professor FORD.

Brief survey on healthful living for the family with special emphasis on conditions that may be modified by the family itself.

A consideration of fitness for parenthood; pre-natal care and childbirth; health factors in the growth and development of the child; some health factors in adult life which affect the family group; family procedures in relation to illness and physical handicap; consideration of ways and means of obtaining medical care through clinics, hospital insurance, and planned savings; information on pending legislation on government-controlled medical and dental care. Fee, $4.

Health in the Home and Community, and Home Nursing. (Home Economics; Family Life 120.) Fall and spring. Credit two hours. (Students who have had Family Life 120 previously should register for 120a, credit one hour.) Lecture, M 3. Van Rensselaer 339. Laboratory, W Th or F 2–4. Van Rensselaer G-22. Assistant Professor PEABODY.

Study of home and community hygiene, first aid in emergencies, and the care of a sick or injured member of the family under the supervision of a doctor. Fee, $4.

Family Relationships and Personality Development. (Home Economics; Family Life 260.) Fall. Credit three hours. Open to juniors and seniors and sophomores by permission of the instructor. M W F 10 and M W F 11. Van Rensselaer 121. Professor ROCKWOOD.

Emphasis is placed upon the human nature aspects of family life; how personality development takes place in the family setting; social interaction among members of the family at different stages of the family cycle and in different cultural groups, within the larger cultural system. Special attention will be given to the impact of the war on family life. Fee, $5.

MATHEMATICS

College Algebra. (Arts and Sciences; Mathematics 10.) One term. Credit three hours.

Plane Trigonometry. (Arts and Sciences; Mathematics 15.) One term. Credit three hours except for students offering Trigonometry for entrance.

Analytic Geometry and Calculus. (Arts and Sciences; Mathematics 65a, 65b, 65c.) Credit three hours for each course. Primarily for students in the College of Arts and Sciences. Prerequisites, Mathematics 15 or the equivalent and a thorough preparation in Intermediate Algebra. Students without thorough preparation in Intermediate Algebra are advised to take Mathematics NM1, NM3 (courses in the Navy curriculum) or 10 *before* taking Mathematics 65a. Either Mathematics

10 or 15, but not both, may be taken simultaneously with Mathematics 65a. Some students interested in Mathematics or allied subjects will be expected to take 65a, 65b, and 65c.

PSYCHOLOGY

Psychology: An Introductory Course. (Agriculture; Rural Education 110.) Spring. Credit three hours. Not open to freshmen. M W F 10. Goldwin Smith C. Professor WINSOR.

Fee, $1.

Psychology for Students of Education. (Agriculture; Rural Education 112.) Summer, fall, or spring. Credit three hours. Prerequisite, course 110, Psychology 1, Human Growth and Development, or the equivalent. Open to second-term sophomores, juniors, and seniors. Fall term, M W F 9. Spring term, M W F 10. Warren 125. Professor KRUSE and Assistant Professor BAYNE.

Fee, $1.

SOCIOLOGY

Introduction to Sociology and Anthropology. (Arts and Sciences; Sociology and Anthropology 2.) One term. Credit three hours. Not open to freshmen or to those who have credit for Social Science B.

The role of cultural factors in shaping personality; the behavior of crowds, races, nations, social classes, and publics; the social organization of rural and urban communities. Fee, in lieu of textbook, $2.

Methods of Statistical Analysis. (Arts and Sciences; Sociology and Anthropology 71.) Two terms. Credit four hours a term. Prerequisites: for the first term, Mathematics 65a, 30, or eqiuvalent, or enrollment therein; for the second term, Mathematics 65b, or equivalent, or enrollment therein.

The analysis of frequency distributions of qualitative and quantitative variables: graphic representations, averages, dispersion, sampling and tests of significance, analysis of variance, regression, correlation, elementary multivariate analysis—including the problem of index numbers in economics and of scale construction in sociology and psychology. Fee for materials, $2 each term.

General Sociology. (Agriculture; Rural Sociology 1.) Fall or spring. Credit three hours. Not open to freshmen except in the second term to those with high scholastic records and upon approval of the instructor. Lectures and discussions, M W F 8. Warren 25. Professor ANDERSON.

This course precedes all others in the department. Its object is to create an understanding of various types of groups, institutions, and organizations that exist in human society. It is an analysis of the human environment in which the individual lives. Both urban and rural society are considered. Fee for materials, $1.

Rural Sociology. (Agriculture; Rural Sociology 12.) Fall. Credit three hours. Open only to juniors and seniors. Course 1, or its equivalent, is recommended as prerequisite, but not required. Lectures, discussions, and special reports. T Th S 11. Warren 325. Professor ————.

A study of the groups, organizations, and institutions found in rural society, their structure and function, and a consideration of means for the improvement of rural social organization.

Social Case Work I. (Agriculture; Rural Sociology 123.) Fall. Credit three hours. Prerequisite, course 1, one course in psychology, and Sociology 10, or equivalents. M W F 9. Warren 340. Assistant Professor STRODE.

An introduction to the history, principles, and practice of social case work in public and private-welfare agencies, including an analysis of the case-study method and the use and development of social resources. Fee for materials, $1.

Social Case Work II. (Agriculture; Rural Sociology 124.) Spring. Credit three hours. Prerequisite, course 124. M W F 9. Warren 340. Assistant Professor STRODE.

Study of social-work practice and procedures in public-welfare agencies, with special reference to case material from rural areas.

MISCELLANEOUS

Orientation. (Agriculture; Orientation.) Fall. Credit one hour. Required of all freshmen in Agriculture. One hour a week, to be arranged. Rooms to be announced.

A course designed to orient students in the life of the University.

Adult Homemaking Education: Organization and Policies. (Agriculture; Rural Education 134b.) Spring. Credit three hours. Should precede course 134c. Discussions, M W F 11. Field trips and individual conferences to be arranged. Martha Van Rensselaer Hall 3M13. Miss ————.

A professional training course for home-economics extension workers and public-school teachers of homemaking for adults; adapted to the needs of public health and social workers and all of those interested in informal homemaking education. Estimated cost of trips, $8. Fee, $5.

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